**No: 5/92** **Ref: EW/G92/03/04** **Category: 1c**

| | |
|---|---|
| **Aircraft Type and Registration:** | Cessna 152 Commuter, G-BNJV |
| **No & Type of Engines:** | 1 Lycoming O-235-L2C piston engine |
| **Year of Manufacture:** | 1980 |
| **Date & Time (UTC):** | 8 March 1992 at 1604 hrs |
| **Location:** | Stoneacre Farm, near Sittingbourne, Kent |
| **Type of Flight:** | Private |
| **Persons on Board:** | Crew - 1 Passengers - 1 |
| **Injuries:** | Crew - Minor Passengers - Minor |
| **Nature of Damage:** | Aircraft destroyed |
| **Commander's Licence:** | Private Pilot's Licence with Night rating |
| **Commander's Age:** | 39 years |
| **Commander's Flying Experience:** | 161 hours (of which 82 were on type) |
| **Information Source:** | Aircraft Accident Report Form submitted by the pilot and additional AAIB enquiries |

The airfield at Stoneacre Farm is listed in Pooleys Guide as Farthing Corner, and has a grass strip 06/24, of 380x20 metres. The pilot had visited the airfield by road three days earlier for the purpose of inspecting the strip. Permission to land there at some future date was apparently obtained at that time, although permission by telephone was not obtained on the actual day of the flight . Prior to the flight from Biggin the pilot consulted the UK Air Pilot and the flight manual, with additional guidance provided by a flying club instructor. The aircraft subsequently landed on runway 06 without difficulty, but it was noted that there was a significant uphill slope. Discussions were held with pilots of the resident flying club, who suggested the option of taking-off from an alternative runway orientated 01/19. Although power cables crossed the middle of the associated field, it offered a take-off run which the pilot estimated was about 500 metres in length. Only the southerly direction was available for take-off due to the proximity of farm buildings at the northern end of the field. The pilot and passenger walked the length of the runway, which was firm and had short dry grass, and they decided that the take-off for the return flight should be made from 19. Their decision was influenced by the fact that the wind-sock indicated zero wind at the time, although flying club members have stated that there was a 6 kt tailwind. Photographs said to have been taken about an hour before JV's subsequent take-off showed the windsock indicating a significant northerly wind.

The passenger on the inbound flight became the pilot for the return journey, and he positioned the aircraft to give the longest possible run before taking-off using the recommended short field technique for this aircraft. This consisted of selecting 10° flap and applying full power before brakes release. During the take-off roll, the aircraft veered slightly to the left into an area of uncut grass, although the aircraft occupants did not notice any deceleration. The pilot reported that he raised the nose at 50 kt IAS and the aircraft lifted-off. Shortly afterwards however, the right wing dropped and despite the application of left rudder, the aircraft crashed into small trees and undergrowth off the end of the runway. The aircraft was substantially damaged, with the engine and battery completely detached. Despite the fuel tanks having ruptured, there was no fire. The occupants, although dazed and bruised, managed to vacate the aircraft without assistance.

The flight manual for the Cessna 152 contains a table giving ground roll distances for flaps set at 10° at a maximum all-up weight (MAUW) of 1670 lbs. Interpolation of this table for the temperature on the day of 7°C and the airfield elevation of 390 feet amsl, gave an indicated groundroll of 705 feet. This figure should then be increased by 15% for operation from a dry grass runway, with accumulative 10% increases for each 2 kt of tailwind. If a tailwind of 6 kt is assumed, the total ground roll distance is increased to 1054 feet, or approximately 321 metres. In the case of G-BNJV, a small reduction in this figure would be expected, since the weight was estimated to be approximately 80 lbs below MAUW. The passenger returned to the airfield on the following day and noted that marks on the runway surface indicated that the aircraft had become airborne some 150 metres before the end of the strip.

Eye-witnesses who both saw the take-off and attended the scene of the accident reported that the flaps appeared to be in the retracted position. However, the chief engineer of the maintenance organisation that later took custody of the wreckage stated that the flap motor output rod was not in the fully retracted position, indicating that at least a small amount of flap had been deployed.